

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO.  
LT-5 reissue

SERIAL NO. 087-  
07/683 549

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
(Use several sheets if necessary)

**APPLICANT**  
Carl T. Nelson

FILED DATE  
4/10/91

**GROUP**  
212

## U.S. PATENT DOCUMENTS

[illegible]

## FOREIGN PATENT DOCUMENTS

[illegible]

**OTHER DOCUMENTS** (including Author, Title, Date, Pertinent Pages, Etc.)

KP	1		Data Sheet, "Switching DC To DC Microconverters -- LSH-6300 Series," date unknown
KP	3		Data Sheet, Unitrode UC 1846 Current Mode PWM Controller integrated circuit, 12/83.
KP	3		Documents relating to the Linear Technology Corporation LT 1070 integrated circuit.

**EXAMINER**

Kristine Beckman

**DATE CONSIDERED**

9-23-91

**EXAMINER:** Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.











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U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO. 11-3 Reissue

SERIAL NO.

187744374

INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

APPLICANT

Carl T. Nelson

FILING DATE

April 10, 1991

GROUP

2102

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
Q	4,777,386	10/1988	Majumdar	307	270	10/1987

## FOREIGN PATENT DOCUMENTS

TRANSLATION

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	YES	NO

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

Q29 Dobkin, Robert C., "Break Loose from Fixed IC Regulators. With Adjustable Three-Terminal Power monolithics You Get Top Performance Along with Versatility," Electronic Design, Vol. 25, No. 8, April 12, 1977, pp. 118-122.

Q30 Frederiksen, Thomas M., Intuitive IC Electronics. A Sophisticated Primer for Engineers and Technicians, 1982, pp. 78-81.

Q31 Gersbach, E. E., "Saturation Control Circuit," IBM Technical Disclosure Bulletin, Vol. 21, No. 8, January 1979, p. 3109.

EXAMINER

Riley

DATE CONSIDERED

12 May 95

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U.S. DEPARTMENT OF COMMERCE  
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ATTY. DOCKET NO.  
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076825

INFORMATION DISCLOSURE  
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APPLICANT

Carl T. Nelson

FILING DATE

April 10, 1991

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U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
Q	4,528,463	07/1985	Kung	307	270	06/1983
Q	4,533,839	08/1985	Balakrishnan	307	270	01/1983
Q	4,549,095	10/1985	Stefani et al.	307	254	11/1982
Q	4,588,906	05/1986	Taylor	307	270	04/1984
Q	4,608,524	08/1986	Yokobori	318	254	04/1985
Q	4,645,986	02/1987	Melbert et al.	315	387	05/1985
Q	4,695,915	09/1987	Mahalek et al.	361	56	09/1987
Q	4,749,876	06/1988	Gale et al.	307	270	12/1986

FOREIGN PATENT DOCUMENTS

TRANSLATION

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

Q 26	Bonkowski, R. L., "A Technique for Increasing Power Transistor Switching Frequency," published by IEEE, February 1984, pp. 735-738.
Q 27	Dobkin, Robert C., "IC with Load Protection Simulates Power Transistor," <u>Electronics</u> , February 7, 1974, pp. 119-123.
Q 28	Dobkin, Robert C., "Variable Output Three Terminal Regulator," <u>New Electronics</u> , July 11, 1978, pp. 36 and 39. <u>No Date</u>

EXAMINER

R.ley

DATE CONSIDERED

12 May 95

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# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

**APPLICANT**

~~Carpenter~~ R. Nelson

**DEPARTING DATE**

April 10, 1991

## GROUP

2102

**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	IF FILING DATE IS APPROPRIATE
	4,427,902	01/1984	Hickman et al.	307	270	03/1982
	4,430,608	02/1984	Nesler	323	282	12/1981
	4,441,068	04/1984	Smith	323	351	10/1981
	4,442,411	04/1984	Gehring	330	296	09/1981
	4,461,979	07/1984	Jeenicke et al.	315	209	05/1982
	4,480,201	10/1984	Jaeschke	307	570	06/1982
	4,491,744	01/1985	Corey	307	270	12/1983
	4,520,438	05/1985	Norton	363	98	07/1983

## FOREIGN PATENT DOCUMENTS

[illegible]

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

Q 23	Rippel, Wally E., "A New Closed Loop Adaptive Base Drive Scheme Minimizes Transistor Drive and Saturation Losses," Proceedings of Powercon 11, Power Concepts, Inc. 1984, pp. G-1-1 to G-1-13.
Q 24	Berger, H. H. and Wiedmann, S. K. 07/00/77, "Speed Enhancement of Saturated Transistors," <u>IBM Technical Disclosure Bulletin</u> , Vol. 20, No. 2, July 1977, pp. 636-637.
Q 25	Bonkowski, Richard L., "A Technique for Increasing Power Transistor Switching Frequency," <u>IEEE Transactions on Industry Applications</u> , Vol IA-22, No. 2, March/April 1986, pp. 240-243.

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07/683,549APPLICANT  
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April 10, 1991GROUP  
2102

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
<i>Q</i>	4,323,825	04/1982	Hayes	315	387	10/1980
<i>Q</i>	4,333,120	06/1982	Kotowaki	361	79	02/1980
<i>Q</i>	4,337,494	06/1982	Huykman	361	86	04/1980
<i>Q</i>	4,345,164	08/1982	Gies	307	255	11/1979
<i>Q</i>	4,346,312	08/1982	Christopherson	307	270	11/1979
<i>Q</i>	4,355,277	10/1982	Davis et al.	323	351	10/1980
<i>Q</i>	4,375,073	02/1983	Glogolja et al.	361	91	01/1980
<i>Q</i>	4,378,580	03/1983	Stich	361	91	11/1981

## FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
					YES	NO

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

<i>Q</i>	Rischmuller, K., "An Improved Base Drive Method Eliminates Switching Aid Networks in Transistorized High Power Converter Circuits," Proceedings of Powercon 8, Power Concepts, Inc., 1981, pp. G1-1-1 to G-1-1-9.
<i>Q</i>	Shultz, Warren, "BAKER Clamps - Traditional Concepts Updated for Third generation Power Transistors," Reprinted with permission of Power Conversion International, July/Aug 1984. <del>(No page numbers)</del>
<i>Q</i>	Holland, Barney, "A New Integrated Circuit for Current Mode Control," Proceedings of Powercon 10, Power Concepts, Inc., 1983, pp. C-2-1 to C-2-7.

EXAMINER

*Riley*

DATE CONSIDERED

*12 May 95*

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**Carl T. Nelson**

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April 10, 1991

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## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
A	4,218,730	08/1980	Marumoto et al.	363	124	11/1978
R	4,220,873	09/1980	Giordano	307	254	<del>09/1980</del>
A	4,234,805	11/1980	Carlsen, II	307	254	03/1978
R	4,254,372	03/1981	Moore, Jr.	323	277	02/1979
A	4,286,175	08/1981	Baker	307	581	05/1979
A	4,291,259	09/1981	Marumoto et al.	318	139	12/1979
A	4,300,081	11/1981	Van Landingham	318	599	03/1980
A	4,309,645	01/1982	De Villeneuve	318	341	05/1979

## FOREIGN PATENT DOCUMENTS

## TRANSLATION

[illegible]

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

Q <sub>17</sub>	Avant, R. L., West, G. E. and Palma, R. E., "A Proportional Drive for Discontinuous Mode DC-to-DC Converters," IEEE, 1984, pp. 352-358.
Q <sub>18</sub>	Grebene, Alan. B., "Bipolar and MOS Analog Integrated Circuit Design," John Wiley & Sons, 1984, pp. <del>183</del> ff. 183-185
Q <sub>19</sub>	Pressman, A., "Switching and Linear Power Supply, Power Converter Design," Hatden Book Co., Inc., 1977, pp. 49-52.

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## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
Q	3,617,845	11/1971	McKenna	318	341	04/1970
Q	3,996,506	12/1976	Kichak	321	13	01/1975
Q	4,027,228	05/1977	Collins	323	21	03/1976
Q	4,074,147	02/1978	Infante	307	230	12/1976
Q	4,156,837	05/1979	Baker	323	4	04/1977
Q	4,176,309	11/1979	Schulz et al.	323	4	03/1978
Q	4,213,068	07/1980	Ahmed	307	255	01/1978
Q	4,215,279	07/1980	Lataire et al.	307	254	03/1978

## FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
Q	0,159,233	03/1985	FPO				X

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

Q	Bell, David A., "Designing Optimal Base Drive for High Voltage Switching Transistors," Proceedings of Powercon 7, 1980, pp. F1-1 to F1-11.
Q	Carpenter, Ralph, "A New Universal Proportional Drive Technique for High Voltage Switching Transistors," Proceedings of Powercon 8, Power Concepts, Inc. 1981, pp. D2-1 to D2-15.
Q	Perkinson, Joseph and Brand, Jerry, "A New Proportional Base Drive Technique Optimizes Turn Off Performance," Proceedings of Powercon 10, Power Concepts, Inc., 1983, pp. B-1-1 to B-1-11.

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## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
Q	4,727,264	02/1988	Neiderff	307	125	06/1985
Q	3,105,158	09/1963	Nichols	307	88.5	06/1960
Q	3,534,281	10/1970	Hillhouse	307	237	02/1969
Q	3,569,742	03/1971	Schroeder	307	254	08/1968
Q	3,641,369	02/1972	Wallingford	307	206	07/1970
Q	3,845,405	10/1974	Leidich	330	207	05/1973
Q	4,028,561	06/1977	Black et al.	307	330	03/1976
Q	4,031,416	06/1977	Peil	307	299	03/1976

## FOREIGN PATENT DOCUMENTS

## TRANSLATION

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	YES	NO

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

Q 8	Collector Diffusion Isolation - A New Bipolar Process for Integrated Circuits, 2nd Edition, October 1972, pp.4-31.
Q 4	Volume III of the Proceedings of Powercon 3: Third National Solid State Power Conversion Conference, June 1976, pp. E3-1 to E3-7.
Q 10	Data Sheet, "LM101A/LM301A, LM107/LM307 Operational Amplifiers," Linear Technology Corporation Linear Databook, 1986, pp. 2-177 to 2-182.

EXAMINER

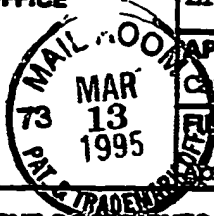
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Q	<del>3,364,737</del> 4164747	08/1979	Gerstner	357	46	02/1977
Q	4,426,590	01/1984	Rischmiller	323	076	11/1981
Q	4,461,960	07/1984	Yasunaga	307	243	11/1983
Q	4,542,399	09/1985	Monticelli	357	46	02/1983

## FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
					YES	NO

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

Q 11	Data Sheet, "LM119/LM219/LM319 High Speed Dual Comparator," National Semiconductor Corporation Linear Databook, 1982, pp. 5-22 to 5-26. No date
Q 12	Data Sheet, "LM111/LM211 Voltage Comparator," National Semiconductor Corporation Linear Databook, 1982, pp. 5-16 to 5-21. No date
Q 13	Dobkin, "Monolithic Temperature Transducer," 1974 IEEE International Solid-State Circuits Conference, Digest of Technical Papers, pp. 126-127, 239.

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## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
Q	4,228,404	10/1980	Widlar	330	267	02/1979
Q	4,595,974	06/1986	Lethellier	363	21	09/1984
Q	4,564,769	01/1986	Melamed	307	300	09/1983
Q	4,645,945	02/1987	de Sartre	307	254	03/1985

## FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
					YES	NO

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

1 Preliminary Data Sheet, "LM1070 5A High Efficiency Switching Regulator,"  
Linear Technology Corporation, 1986, pp. 10-14 to 10-17.

2 Nelson, Carl, "Switching Controller Chip Handles 100W from a 5-Pin Package,"  
Electronic Design, Dec. 1985, pp. 73-78.

3 Data Sheet, "LM117/LM217/LM317 3 Terminal Adjustable Regulator," National  
Semiconductor Corporation Linear Databook, 1982, pp. 1-23 to 1-30. *Not Read*

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